

# CSE 4251: Lab 1

## Due Date:

September 13 11:59 PM

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## Overview

These exercises will allow you to have some practice with the Unix/Linux environment.

## Objectives

- Get familiar with the system working environment and basic commands
- Get familiar with a line editor
- Review of Unix/Linux most used commands

## Instructions

Create a new folder named Lab1 in your UNIX working directory. The exercises below should all be created within that new folder. (Max. points are mentioned within [])

## Exercise 1 Description (6 points)

Login into the Unix/Linux server following the instructions given in the handout posted on Carmen. Go over the tutorial to practice the UNIX commands and get yourself familiar with your working directory and environment.

### How can you save the terminal process you do in a text file to submit those results?

To record your session in a file, use the command *script*. This command sends everything you do in the terminal to a file. Read the man page (*man script*).

Try:

*script* labtext.txt (it starts recording)  
then type commands like *ls*, *date*  
when done, type the command *exit* (it terminates the typescripting - “recording”- of the terminal session. Take a look at the file created to validate it (use the command *more* or *cat* and filename).

Now start a new script **commands.txt** and save the commands for this part of lab and then exit recording. **You should include this file in the submission.** You are going to use this mechanism to record, save and then submit your Labs results in future too. In case your script recorded file is

showing junk characters when you do cat (these are control characters), copy paste the terminal's contents to txt file and submit. **Make sure you script record when you are sure your script/cmds work fine (without any errors) otherwise it is difficult to parse a long script recording with many errors.**

- Make a directory Lab1 (1 command) [1]
- Enter the directory and create a file first.txt using *vim* (2 commands) [1]
- Type something and save the file and quit [1]
- Copy the file first.txt to a new file second.txt (1 command) [1]
- Use the *ls* command to list the files and verify the path with *pwd* (2 commands) [1]
- Go back to home directory and delete the Lab1 directory (2 commands) [1]

## Exercise 2 Description (8 points)

In this exercise you are going to examine your working **CSE environment** and to know where in the system you are in your login account. Open a text file **workingEnvironment.txt** to answer each one of the questions (very short to the point response).

- What is your default shell? What is your prompt? You may guess it. To validate it type: `echo $SHELL <enter>`. What is echo, what is SHELL? [1]
- What is your home directory, user name, login name, default paths? Hint: Try again the echo command. [2]
- Try *uname* to get your server information: OS version and kernel release, processor type, etc. (use man page to know how to use it) [1]
- Which processes are running? What information could get from those processes? [1]
- Create a simple bash shell script which prints "hello world". Change the permission of execution for yourself and execute it [3]

Record the script by running the commands to answer the above questions in a file **workingEnvironment\_script.txt**.

## Exercise 3 Description (6 points)

Some commands are useful to check and organize file content and file systems. What are the following pair of commands useful for? Save the responses in **organizeFiles.txt**

Hint: Some commands are not covered in the first lecture. Use the *man command-name* to read the description in the online manual pages.

- **df and du (2 points)**

- **cmp and diff (2 points)**
- **cat and wc (2 points)**

Try them, creating the files needed to make use of them. Save your work session in a text file called **organizeFiles\_script.txt**

## **Submission Instructions**

Remember for Exercise 2 and 3, you need one file for answering questions and one file for recording commands.

To submit, create a single zip file named Lab1.zip that contains all the files and then upload that file to the Carmen for Lab1.

**commands.txt**

**workingEnvironment.txt**

**workingEnvironment\_script.txt**

**organizeFiles.txt**

**organizeFiles\_script.txt**